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A brief outline of Ibn Sīnā’s conception of number. (English) [Zbl 1452.01007]

Summary: Ibn Sīnā (980–1037), one of the influential philosopher-scientists of the classical Arabic-Islamic tradition who was known to the West by the Latinised name Avicenna, has introduced a major shift in the philosophy of mathematics that is neither Platonist nor Aristotelian, his conception of number is constructed in 5 stages:

1. The recognition that mathematical entities are intentional objects and that this amounts to provide an intentional notion of existence;
2. The specific act of repetition inferred from apprehending unity;
3. The generation of numbers:
   3.1. Generation of number two as first element;
   3.2. Generation of infinity by an epistemic agent.

MSC:
01A30 History of mathematics in the Golden Age of Islam
03A05 Philosophical and critical aspects of logic and foundations

Biographic references:
Ibn Sīnā

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